

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number  
**WO 2005/056941 A1**

(51) International Patent Classification<sup>7</sup>: **E03D 9/03**

(21) International Application Number:  
PCT/GB2004/005151

(22) International Filing Date: 7 December 2004 (07.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0328702.6 11 December 2003 (11.12.2003) GB

(71) Applicant and

(72) Inventor: **SLADE, Brian, Parry** [GB/GB]; 20 Star Road,  
Ashford, Kent TN24 8BX (GB).

(74) Agent: **KEITH W. NASH & CO.**; 90-92 Regent Street,  
Cambridge CB2 1DP (GB).

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

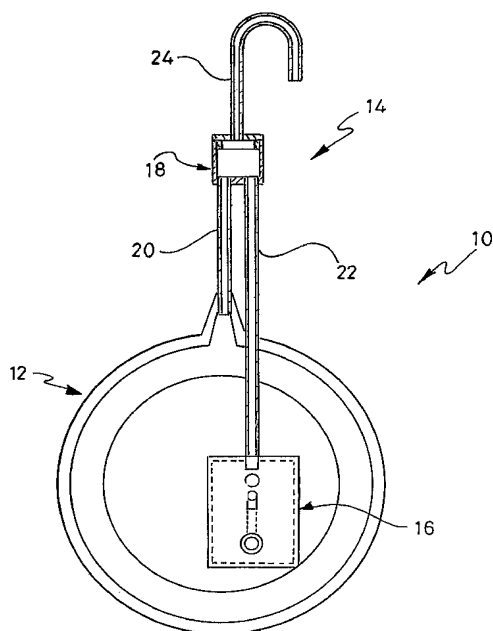
(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: DISPENSING MEANS AND VALVE MEANS FOR USE THEREWITH



(57) Abstract: A dispensing means (10) for delivering a dose of a first liquid into a second liquid is provided, the dispensing means comprising an enclosure (12) for the first liquid, and valve means (16), the dispensing means being operable such that raising a level (114) of a second liquid relative to the dispensing means so as to subject the dispensing means to hydrostatic pressure causes a dose of the first liquid to be displaced from the enclosure (12) to establish a column (118) of the first liquid that acts on the valve means, and subsequent lowering of the level (114) of the second liquid relative to the dispensing means so as to reduce the hydrostatic pressure acting on the valve means (16) causes the valve means to deliver the dose. Also provided is a valve means (16) adapted for attachment to an inlet tube and comprising a valve body (62) and a flexible membrane (72), which, when attached to an inlet tube (22) containing a column of a first liquid and immersed in a second liquid, the hydrostatic pressure causes the flexible membrane (72) to seal the valve body (62) so as to prevent a flow of the first liquid, and when a level of the second liquid is lowered, the flexible membrane (72) unseals the valve body (62) so as to allow a flow of the first liquid through the valve body (62).



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*